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Part II

Environmental Protection Agency

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Approval and Promulgation of Air Quality Implementation Plans; States of Minnesota and Michigan; Regional Haze State Implementation Plan; Federal Implementation Plan for Regional Haze; Final Rule

combustion efficiency can increase NO_X emissions.[8]

Concerning the GCP requirement in the taconite MACT rule, GCP for the MACT is not the same as GCP for NO_X. GCP for MACT is aimed at reducing emissions of products of incomplete combustion (PIC). To minimize PICs, the operating conditions targeted are generally the opposite from those targeted for reducing NO_X. As explained in the taconite MACT rule (68 FR 61883, October 30, 2003), "The basic method used in reducing NO_X emissions is a reduction in combustion temperature, which is the opposite strategy needed for minimizing PIC (i.e., increasing combustion temperature)." In conclusion, GCP would be expected to increase NO_X emissions, not decrease them.

Commenter: Cliffs Natural Resources and ArcelorMittal Minorca Mine.

Comment: Cliffs commented that EPA is required to consider "any existing pollution control technology at the source." Cliffs argued that EPA failed to adequately consider or consistently apply this threshold factor to the BART determinations in its proposed rule.

Response: To the extent that Cliffs is referring to its use of GCP as an existing pollution control technology, neither the operational practices that comprise GCP nor their impact on reducing emissions has been documented by Cliffs. As described in detail in the response to the previous comment, EPA does not consider Cliffs' use of GCP to constitute "existing control technology" on these furnaces.

Commenter: National Parks Conservation Association.

Comment: NPCA commented that EPA failed to consider fuel-blend alternatives, including greater or exclusive use of natural gas at grate-kiln furnaces, as part of the Agency's BART analysis for SO_2 and NO_X. Fuel-blend alternatives are a technically feasible control option because indurating furnaces can successfully be operated on alternative fuels, namely fuel blends that consist primarily of natural gas. Contrary to the taconite plant owners' assertions, consideration of alternative fuels is required for BART where changing to cleaner fuel would not necessitate significant changes at any existing facility. There is no legal rationale for excluding this viable pollution control. Additionally, the assertion that alternative fuel costs are uncertain has no merit. There is simply no factual support for price uncertainty being a basis to reject consideration of natural gas as an alternative to coal. Even if significant uncertainty existed, it can be dealt with appropriately in the BART analysis. Finally, the assertion that moving towards a more natural gas-based fuel blend would mean higher NO_X emissions in exchange for lower SO_2 emissions is a red herring. The existence of such potential secondary impacts is not a reason to discard a BART option prior to analysis. It is a reason to perform the analysis itself.

Response: Alternative fuels were not considered for the following reasons. The straight-grate furnaces at ArcelorMittal, Hibbing Taconite, and Northshore Mining already burn natural gas. Similarly, U.S. Steel's Keetac and Minntac facilities already burn a fuel mix of natural gas and low-sulfur coal. While fuel-blend alternatives could have been considered for the grate-kiln furnaces at United Taconite and Tilden, EPA proposed to require the most stringent control technology, flue-gas desulfurization (FGD), at these facilities. As the BART Guidelines make clear, where EPA or the states choose the most stringent control option as BART, other control options need not be considered. Therefore, EPA was not required to consider fuel-blend alternatives as part of the Agency's BART analysis. However, EPA notes that subsequent to the proposal, Tilden agreed to convert to natural gas, while United Taconite will be substantially reducing its emissions through the use of natural gas and low-sulfur coal.

Commenter: National Parks Conservation Association.

Comment: EPA's NO_X BART determinations conclude that significant reductions could be achieved cost-effectively by the installation of low NO_X burners at all taconite kilns. While NPCA concurred with this conclusion, it commented that EPA failed to fully consider the use of regenerative selective catalytic reduction (RSCR). For instance, although RSCR was noted as an available technology in Keetac's BART analysis, EPA's FIP made no note of it. For Tilden, on the other hand, EPA noted this option, but only to point out that the company found it to be infeasible. In fact, this technology appears to be feasible for indurating furnaces. At a minimum, a more thorough evaluation by EPA is necessary. In this case, EPA has not shown that circumstances preclude the application of RSCR to the units in question via evaluation of gas characteristics or demonstration of technical challenges. It has offered no evidence that RSCR is technically infeasible. A fuller evaluation of this technology is warranted as part of a BART determination.

Response: EPA did evaluate post-combustion NO_X-control options when it reviewed Minnesota's regional haze plan and agreed with the state's determination that post-combustion control of NO_X emissions from taconite facilities are not BART. For the proposed and now final rule, EPA evaluated new data on the use of low NO_X burners at taconite facilities and, after a five-factor BART analysis, determined that low NO_X burners are BART for these facilities. The BART analyses are fully described in section V of the proposed rule (77 FR 49308). EPA also considered RSCR and related selective catalytic reduction technologies at some of the subject taconite units. EPA concluded in its BART analyses that RSCR and other post-combustion controls do not represent BART for the subject taconite units because, after the installation of low NO_X burners, the incremental costs of installing further post-combustion controls are unreasonably high. Therefore, this final rule requires that taconite indurating furnaces meet NO_X emission limits consistent with low NO_X burner technology.

Commenter: National Parks Conservation Association.

Comment: EPA's analysis for SO_2 provides evidence that dry FGD is feasible for taconite facilities, and the Agency requires the use of this technology at the three highest emitting lines (at United Taconite and Tilden). We support these determinations. However, EPA fails to fully analyze the use of dry FGD on the lower-emitting units, instead concluding, without support, that it would not be "economically reasonable." NPCA asks that EPA analyze whether dry FGD, clearly a feasible technology, could provide cost effective reductions at additional units.

Response: EPA's BART analysis demonstrated that dry FGD is feasible for the highest emitting lines when those lines are uncontrolled, but determined that the same technology has unreasonably high incremental costs for units with lower uncontrolled emissions. EPA notes, however, that while FGD was originally proposed as BART for the units at United Taconite and Tilden, those facilities have since agreed to operational limits on the types of fuels that may be burned As a result, FGD is no longer being required as BART. Additional discussion of this issue can be found in section III of the preamble.

Commenter: National Parks Service.

Comment: It appears that low temperature oxidation is technically and economically feasible for the entire

[8] Docket # EPA–R05–OAR–2010–0037–0069.